

Figure 1: Tune footprints with sextupoles and single parasitic interaction at (1)  $3\sigma$  separation, (2)  $10\sigma$  separation . At  $10\sigma$  separation, the impact of the parasitic interaction is very small and the footprint is almost entirely due to sextupoles.

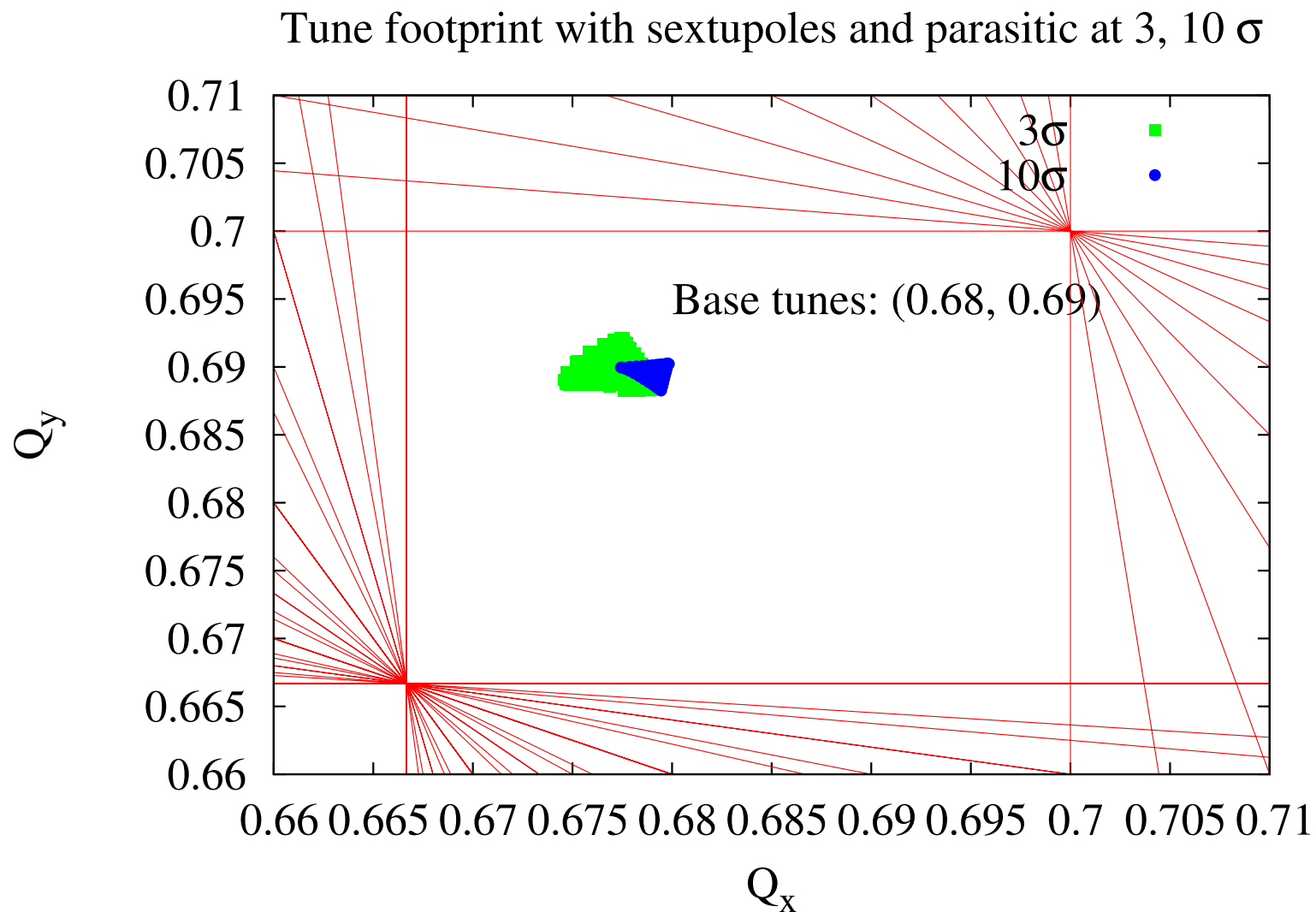


Figure 2: Tune footprints with sextupoles and single parasitic interaction at (1) 3  $\sigma$  separation, (2) 10  $\sigma$  separation. Blue beam base tunes = (0.68, 0.69). The closest resonances are the 3rd, 6th and 10th order resonances but the footprint is clear of these resonances at both separations.

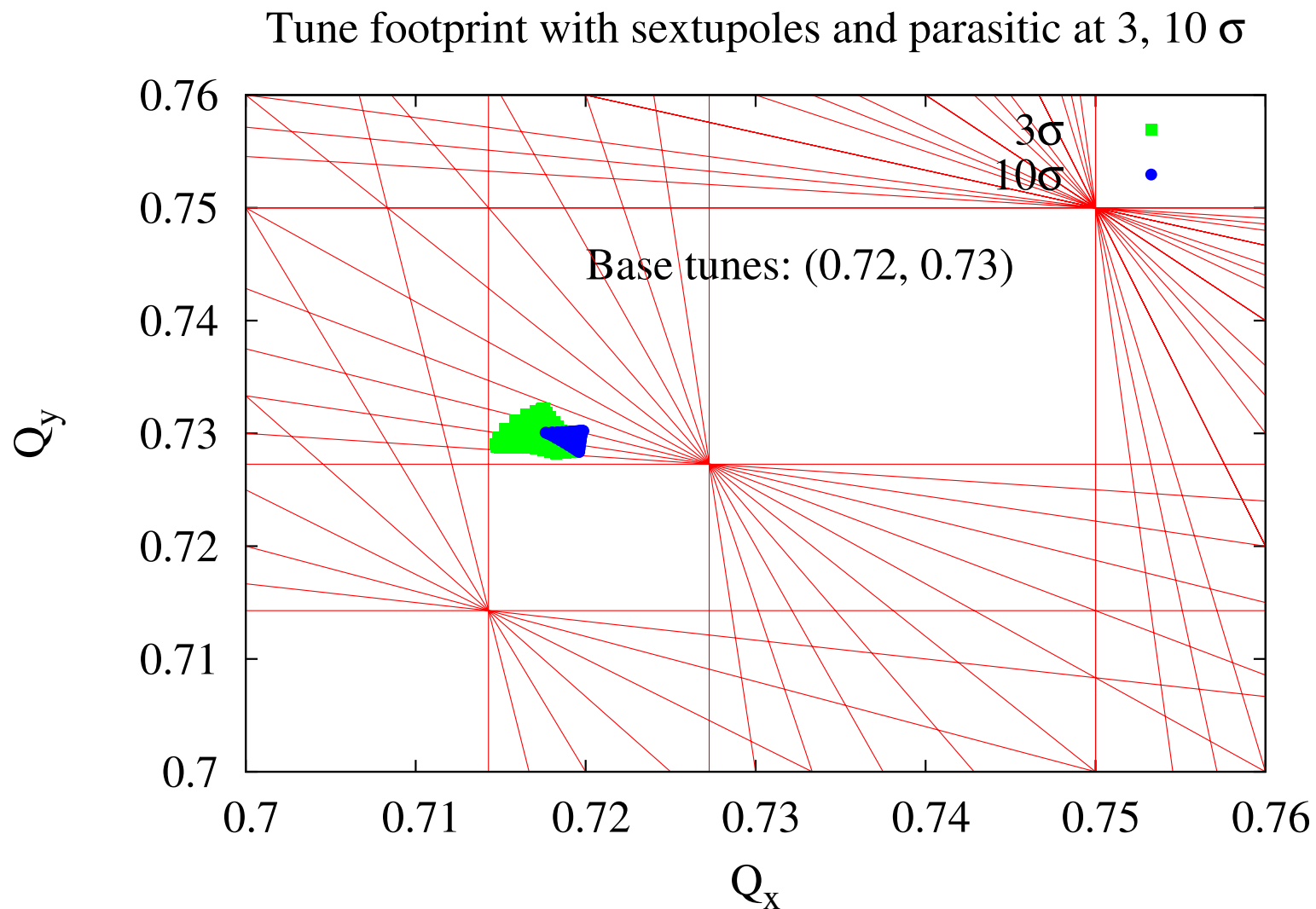


Figure 3: Tune footprints with sextupoles and single parasitic interaction at (1) 3  $\sigma$  separation, (2) 10  $\sigma$  separation. Blue beam base tunes = (0.72, 0.73). The closest resonances are the 7th and 11th order resonances. At 3 $\sigma$  separation, the footprint spans these resonances but at 10 $\sigma$  separation, only the 11th order resonances are spanned.